

AMENDMENT UNDER 37 C.F.R. § 1.111
Application Serial No. 10/705,261
Attorney Docket No. Q78301

REMARKS

Claims 1-16 are all the claims pending in the application. Claims 1-8 and 12-16 were withdrawn from further consideration pursuant to the Response to Election of Species Requirement filed April 7, 2006. Claims 9 and 10 are amended. No new matter is presented.

To summarize the Office Action, the specification has been objected to for informalities and claims 9 and 10 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tsukamoto (U.S. Patent No. 6,148,169) in view of Kadokura et al. (U.S. Patent Publication No. 2003/0039913, hereinafter “Kadokura”).

The outstanding objection and rejections are traversed, as discussed below.

Objection to the Specification

The Examiner objects to the specification due to a typographical error at page 11. Applicant has amended the specification to correct the informality noted by the Examiner, and requests that the objection be withdrawn.

Claim Rejections - 35 U.S.C. § 103

Claims 9 and 10 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tsukamoto in view of Kadokura. Applicant respectfully traverses. As discussed below, neither Tsukamoto nor Kadokura, whether taken alone or in combination, teach or suggest all the features of these claims.

For instance, claim 9 defines a fixing device comprising, *inter alia*, a nip portion defined between the heat contact member and the pressing member, wherein the pressing member includes **two nip rollers** positioned at an inlet side and an exit side of the nip portion respectively and adjoining the heat contact member; an endless belt run about the two nip rollers and capable of moving in a cycling manner; and a **spring** strongly pressing **the exit side nip roller** against the heat contact member, and establishes the nip portion by holding a part of an outside surface of the endless belt in pressure contact with the heat contact member. Claim 9 additionally recites the features of the inlet side nip roller has a lower pressing force for pressing the endless belt against the heat contact member than a pressing force of the exit side nip roller for pressing the endless belt against the heat contact member, and the nip pressure in the nip portion ***monotonously increases*** from the inlet side to the exit side.

Applicant further notes that when a nip pressure distribution at a nip portion changes significantly, especially when the pressure decreases, a portion of an endless belt bends at the decreasing position of the pressure. Further, in an apparatus in which a toner image is formed with a liquid developer, a carrier liquid may remain on a recording medium and thus remaining liquid carrier may accumulate in the bending portion. This is one of the factors that decrease fixation.

On the contrary, in a fixing device as defined by claim 9, since an exit side nip roller is pressed against a heat contact member by the **spring**, a nip pressure at an inlet side is lower than at an exit side. In addition, the nip pressure ***monotonously increases*** from the inlet side to the exit side. As a result, the recording medium is assuredly prevented from bending at the nip

portion, and excellent fixing performance can be achieved. *See, e.g.*, Specification at pages 24-28.

Applicant submits that neither Tsukamoto nor Kadokura teach or suggest *at least* the features of the spring and the nip pressure monotonously increasing from an inlet side to an exit side, as recited by claim 9. For instance, Tsukamoto teaches a fixing device in which a stable discharge region A is formed between a heat roller 2 and paper P, such that a bias voltage applied from bias roller 6 to aluminum roller 3 sets up a preselected potential difference between roller 6 and metallic roller 9. *See* Tsukamoto at col. 5, lines 32-53 and Fig. 2. However, the modification of the illustrative embodiment depicted in Figure 5 of Tsukamoto and relied upon by the Examiner merely teaches a nip between heat roller 2 and belt 12 having a “far greater” width than the nip between heat roller 2 and press roller 8 for “high speed fixation”. *See* Tsukamoto at col. 7, lines 24-37.

On the other hand, Kadokura teaches an image forming process in which a pressure pad is used as a pressure member, and a nip between a heat fixing roller and an endless belt, which is produced with a pressure pad, ranges from 3 to 12 mm. *See* Kadokura at paragraph 43-44 and Fig. 1. However, neither Tsukamoto nor Kadokura suggest a fixing device in which an exit side nip roller is pressed against a heat contact member by a spring, as claimed, and the nip pressure ***monotonously increases*** from the inlet side to the exit side.

Thus, as evidenced by the foregoing, even assuming *arguendo* the Examiner’s asserted motivation to combine Tsukamoto and Kadokura is proper, the combination fails to teach or suggest all the features of the fixing device defined by claim 9. Reconsideration and withdrawal

AMENDMENT UNDER 37 C.F.R. § 1.111
Application Serial No. 10/705,261
Attorney Docket No. Q78301

of the rejection is therefore requested. As to claim 10, Applicant submits that claim 10 is allowable at least by virtue of depending from claim 9 and by virtue of the features recited therein. Accordingly, allowance of claims 9 and 10 is requested.

With respect to withdrawn claims 11-14, Applicant notes that these claims depend from claim 9, and would therefore allowable at least by virtue of their dependency. Thus, as examination and allowance of these withdrawn claims should not necessitate a serious burden by virtue of their dependency from claim 9, the Examiner is kindly requested to rejoin claims 11-14.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
Application Serial No. 10/705,261
Attorney Docket No. Q78301

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Brian K. Shelton
Registration No. 50,245

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: **August 8, 2006**